Complete Summary

GUIDELINE TITLE

Vision rehabilitation for adults.

BIBLIOGRAPHIC SOURCE(S)

American Academy of Ophthalmology Vision Rehabilitation Committee. Vision rehabilitation for adults. San Francisco (CA): American Academy of Ophthalmology; 2007. 28 p. [70 references]

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previous version: American Academy of Ophthalmology (AAO). Vision rehabilitation for adults. Preferred practice pattern. San Francisco (CA): American Academy of Ophthalmology (AAO); 2006. 31 p. [42 references]

All Preferred Practice Patterns are reviewed by their parent panel annually or earlier if developments warrant and updated accordingly. To ensure that all Preferred Practice Patterns are current, each is valid for 5 years from the "approved by" date unless superseded by a revision.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Moderate to profound visual impairment in one or both eyes

GUIDELINE CATEGORY

Diagnosis
Evaluation
Rehabilitation

CLINICAL SPECIALTY

Geriatrics
Ophthalmology
Physical Medicine and Rehabilitation

INTENDED USERS

Allied Health Personnel
Health Plans
Occupational Therapists
Physicians

GUIDELINE OBJECTIVE(S)

To reduce the functional impact of the vision loss on patients' lives to maintain independence, productive activity, safety, and life satisfaction by addressing the following goals:

- Identify patients with low vision and quantify their visual loss
- Assess functional impairments due to low vision
- Evaluate the potential to use residual vision
- Educate patients about vision loss, the potential benefits of rehabilitation, and rehabilitation options
- Inform patients about the parameters of training and its potential benefit
- Engage patients in their rehabilitation
- Maximize patients' independent completion of activities of daily living, safety, and participation in their community
- Address the emotional and psychological adjustment to vision loss
- Provide information to patients about community and national resources and social support

TARGET POPULATION

Adults with low vision

Note: Although low vision can occur at any age, the prevalence of eye disease increases significantly with age. This document addresses primarily older adults.

INTERVENTIONS AND PRACTICES CONSIDERED

1. Initial evaluation
    - History including medical and ophthalmic history and functional history
    - Comprehensive adult medical eye evaluation
    - Low vision evaluation including visual function, functional implications of visual impairment, and psychological status
2. Rehabilitation interventions and devices

- Spectacles, magnifiers, telescopic devices
- Nonoptical aids including lighting, contrast enhancement, glare control, large print
- Sight substitutes such as audio books, talking watches, tactile markers, Braille
- Support cane or long cane for safe mobility
- Scotoma identification and eccentric fixation training
- Mobility instruction and fall prevention
- Support groups and counseling, community state programs
- Home safety and adaptations

3. Patient education and support

MAJOR OUTCOMES CONSIDERED

- Emotional and psychological adjustments to vision loss
- Ability to complete independently activities of daily living
- Knowledge of available adaptive devices and resources

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

In the process of revising this document, a detailed literature search in Medline and the Cochrane Library for articles in the English language was conducted on the subject of vision rehabilitation for the years 2000 to March 2007.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Strength of Evidence Ratings

Level I: Includes evidence obtained from at least one properly conducted, well-designed randomized controlled trial. It could include meta-analyses of randomized controlled trials.

Level II: Includes evidence obtained from the following:

- Well-designed controlled trials without randomization

- Well-designed cohort or case-control analytic studies, preferably from more than one center
- Multiple-time series with or without the intervention

Level III: Includes evidence obtained from one of the following:

- Descriptive studies
- Case reports
- Reports of expert committees/organization (e.g., Preferred Practice Patterns [PPP] panel consensus with external peer review)

METHODS USED TO ANALYZE THE EVIDENCE

Review of Published Meta-Analyses
Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

The results of the literature search on the subject of vision rehabilitation were reviewed by the Vision Rehabilitation Committee and used to prepare the recommendations, which they rated in two ways. The committee first rated each recommendation according to its importance to the care process. This "importance to the care process" rating represents care that the committee thought would improve the quality of the patient's care in a meaningful way. The committee also rated each recommendation on the strength of evidence in the available literature to support the recommendation made.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Ratings of Importance to Care Process

Level A, defined as most important

Level B, defined as moderately important

Level C, defined as relevant, but not critical

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

The guideline was reviewed by the Council and approved by the Board of Trustees of the American Academy of Ophthalmology (September 8, 2007).

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Ratings of importance to the care process (A-C) and ratings of strength of evidence (I-III) are defined at the end of the "Major Recommendations" field.

Vision rehabilitation trains patients to use their residual vision or alternate compensatory techniques effectively and to make practical adaptations in their environment to facilitate reading, activities of daily living, ensure safety, support participation in their community, and enhance emotional well-being. All ophthalmologists have a minimum responsibility to recommend vision rehabilitation as a continuum of their care and to provide information about rehabilitation resources for patients with vision loss that impacts function. [A:III]

The role of the treating ophthalmologist is to evaluate and treat eye disease before referring a patient to vision rehabilitation. The treating ophthalmologist also will reassess a patient's condition periodically to prevent further vision loss because many conditions that result in low vision are progressive. Patients who report vision loss during the course of rehabilitation should be referred to the treating ophthalmologist for evaluation. [A:III]

Vision rehabilitation must be individualized to meet each patient's particular goals, limitations, and resources (e.g., age, finances to purchase devices, and caregivers) and must address reading, activities of daily living, safety, participation in the community, and well-being [A:III].

Initial Evaluation

History

An initial history should include the following elements:

- A medical and ophthalmic history outlining the patient's understanding of the diagnosis, duration of vision loss, and symptoms of visual hallucinations (Charles Bonnet syndrome), falls, and depressed mood [A:III]
- A functional history including difficulties with near, intermediate, and distant vision-related tasks; mobility; falls; fear of falling; driving; vocational and avocational activities; independence; and participation in community activities [A:III]

A functional history may include, but not be limited to, questions concerning the following:

- Problem areas and their significance to the patient
- Near and intermediate vision-related tasks
- Distant-vision-related skills
- Mobility
- Glare
- Participation in community activities

The history should also identify the patient's stated goals, priorities, and values. [A:III] It should include a review of physical impairments relevant to rehabilitation (e.g., tremor, loss of hearing, cognitive deficit, and restricted mobility) and medications. [A:III] The evaluation should also consider the patient's psychosocial history, including his or her living situation, supports, responsibilities, adjustment to vision loss, depression, and fear of the future, and a social history, which includes driving, vocational activities, and avocational activities. The patient may elect to have a friend or family member present during the evaluation process to confirm information and to serve as coach or helper. [A:III]

Examination

A comprehensive adult medical eye evaluation (see the National Guideline Clearinghouse [NGC] summary of the American Academy of Ophthalmology [AAO] Preferred Practice Pattern Comprehensive adult medical eye evaluation) is conducted by the referring ophthalmologist before referring for the low vision evaluation. Elements of the ocular examination relevant to vision rehabilitation may be done as part of the vision rehabilitation care process. [B:III] Specific elements included in a low vision evaluation are visual function, functional implications of visual impairment, and psychological status.

Evaluation of Visual Function

A review of relevant clinical notes, previous diagnosis, and previous ancillary testing such as retinal photographs or visual fields is helpful in evaluating visual function. [A:III] Other components of the evaluation are the following:

- Visual acuity and refraction [A:III]
- Contrast sensitivity [A:III]
- Visual fields, scotomas, and preferred retinal loci [A:III]

Assessment of Functional Implications

The low vision evaluation includes an assessment of the functional implications that correspond with the patient's visual function and eye condition. This includes overall visual impairment with respect to distance and near acuity, contrast sensitivity, and visual field and other relevant physical or cognitive impairments. [A:III] Assessing functional implications should include consideration of the following: [A:III]

- Risk of medication errors, label misidentification/product misuse, diabetic mismanagement, nutritional compromise
- Risk of injury from accidents, including falls, cuts, burns, fractures, or head injuries
- Risk of errors in financial management and/or writing/recordkeeping errors
- Risk of social isolation, depression, or economic hardship
- Potential to benefit from rehabilitation training

Assessment of Psychological Status

The patient's psychological status is important to assess. Factors to consider include:

- Motivation, responsibilities, and supports [A:III]
- Mood, affect, depression, and adjustment to vision loss (Geriatric Depression Scale, Depression, Anxiety and Stress Scale, or other screening question may be used) [A:III]
- Cognitive ability [A:III]
- Stamina, energy, and activity level [A:III]

Refer to the original guideline document for additional information on initial evaluations.

Rehabilitation Interventions and Devices

The rehabilitation team should provide continued opportunities for training and reinforcement, as appropriate, to accomplish sustained success with rehabilitation interventions and devices and must offer hope to patients whose lives have been significantly affected by vision loss. [A:III]

The effectiveness, ergonomics, and appropriateness of the following interventions and devices should be considered and the patient response to each should be noted: [A:III]

- Spectacles, including high plus reading eyeglasses
- Handheld magnifiers
- Stand magnifiers
- Video magnifiers
- Telescopic devices (Szlyk et al., 2000)
- Lighting
- Glare control
- Magnification
- Nonoptical aids, including lighting, contrast enhancement, daily living aids, glare control, large print, and signature templates
- Sight substitutes such as audio books, talking watches, tactile markers, Braille
- Computer adaptations using magnification and audio output
- Support cane or long cane for safe mobility

When considering recommendations for low vision rehabilitation, the clinician and patient should discuss the following topics: [A:III]

- Potential for rehabilitation interventions
- Training, including eccentric fixation, scotoma avoidance, and practical adaptations in activities of daily living
- Mobility instruction and fall prevention
- Driving and transportation alternatives
- Charles Bonnet visual hallucinations
- Home safety and adaptations
- Family concerns
- Support groups and counseling
- Community state programs and other local, national, and online resources

Rehabilitation professionals and staff are facilitators who can provide continued encouragement and support in addition to training and recommendations, but the patient must be an active participant and actually do the work to ensure success and sustained benefit. [A:III]

Patient Education and Support

Patient Well-Being

The evaluation and assessment in vision rehabilitation is framed by the patient's individual goals, skills, and responses to aids and concludes with a comprehensive discussion (Fletcher, 1999). The psychological factors that should be discussed include independence, importance of activity, family interactions, communication, patient attitudes, patient concerns (e.g., fear of blindness), and patient questions, which may include questions about legal blindness, driving status, or how to prevent further vision loss (Williams et al., 1998) [A:III]

Professional assessment should be recommended for patients who report severe change in mood. [A:III]

Internists, family practice physicians, and geriatricians should be informed that when vision loss is not reversible, a patient with vision loss is at high risk for depression. [A:III]

Providers

A multidisciplinary team approach is recommended to effectively address the functional and psychological problems caused by vision loss. [A:III] The physician is the team leader and directs the rehabilitation program, and the patient is an active participant in the rehabilitation process. [A:III]

Academy SmartSight™ Model of Vision Rehabilitation

The rehabilitative needs of patients vary considerably. The setting, level of care, and disciplines required depend on the complexity of the functional problems, psychosocial status, and personal attributes. The Academy outlines a spectrum of clinical care in its SmartSight Initiative three-level model of vision rehabilitation (http://www.aao.org/smartsight). The most important part of the SmartSight model is Level 1, which asks all ophthalmologists seeing patients with less than 20/40 acuity, contrast sensitivity loss, scotoma, or field loss to Recognize and

Respond. They should Recognize the functional impact of partial vision loss and Respond by assuring the patient that much can be done to improve their function and giving them the SmartSight Handout rather than letting the patient assume that nothing more can be done. (See Appendices 2 and 3 in the original guideline document for the SmartSight model levels 1, 2, and 3).

For additional discussion of treatment, please see the original guideline document.

Definitions:

Ratings of Importance to the Care Process

Level A, defined as most important

Level B, defined as moderately important

Level C, defined as relevant but not critical

Ratings of Strength of Evidence

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Level II: Includes evidence obtained from the following:

- Well-designed controlled trials without randomization
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Level III: Includes evidence obtained from one of the following:

- Descriptive studies
- Case reports
- Reports of expert committees/organization (e.g., Preferred Practice Patterns [PPP] Panel consensus with external peer review)

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

REFERENCES SUPPORTING THE RECOMMENDATIONS

References open in a new window

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

When reviewing the literature for vision rehabilitation, the committee did not identify any Level I or Level II evidence. All recommendations were based on Level III evidence (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Comprehensive vision rehabilitation enhances quality of life for patients whose function is compromised by vision loss by addressing the following:

- Reading
- Activities of daily living
- Safety
- Community participation
- Well-being

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

- **Preferred Practice Patterns provide guidance for the pattern of practice, not for the care of a particular individual.** While they should generally meet the needs of most patients, they cannot possibly best meet the needs of all patients. Adherence to these Preferred Practice Patterns will not ensure a successful outcome in every situation. These practice patterns should not be deemed inclusive of all proper methods of care or exclusive of other methods of care reasonably directed at obtaining the best results. It may be necessary to approach different patients' needs in different ways. The physician must make the ultimate judgment about the propriety of the care of a particular patient in light of all of the circumstances presented by that patient. The American Academy of Ophthalmology is available to assist members in resolving ethical dilemmas that arise in the course of ophthalmic practice.
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device he or she wishes to use, and to use them with appropriate patient consent in compliance with applicable law.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

IMPLEMENTATION TOOLS

Patient Resources
Resources

For information about availability, see the "Availability of Companion Documents" and "Patient Resources" fields below.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

American Academy of Ophthalmology Vision Rehabilitation Committee. Vision rehabilitation for adults. San Francisco (CA): American Academy of Ophthalmology; 2007. 28 p. [70 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1994 Feb (revised 2007 Sep)

GUIDELINE DEVELOPER(S)

American Academy of Ophthalmology - Medical Specialty Society

SOURCE(S) OF FUNDING

American Academy of Ophthalmology without commercial support

GUIDELINE COMMITTEE

Vision Rehabilitation Committee; Preferred Practice Patterns Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Vision Rehabilitation Committee Members: Lylas G. Mogk, MD, Chair; William G. Crane, Jr., DO, FACS; Mary Lou Jackson, MD; Mary Gilbert Lawrence, MD, MPH; Samuel N. Markowitz, MD; Rebecca K. Morgan, MD; Yale Solomon, MD

Preferred Practice Patterns Committee Members: Sid Mandelbaum, MD, Chair; Emily Y. Chew, MD; Linda M. Christmann, MD; Douglas E. Gaasterland, MD; Samuel Masket, MD; Stephen D. McLeod, MD; Christopher J. Rapuano, MD; Donald S. Fong, MD, MPH, Methodologist

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

These authors have disclosed the following financial relationships occurring from January 2006 to August 2007:

Lylas G. Mogk: Ballantine Books – Patents/Royalty. VisionCare Ophthalmic Technologies, Inc. – Consultant/Advisor

Mary Lou Jackson: EA Baker CNIB – Grant support

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GUIDELINE AVAILABILITY

Electronic copies: Available from the American Academy of Ophthalmology (AAO) Web site.

Print copies: Available from American Academy of Ophthalmology, P.O. Box 7424, San Francisco, CA 94120-7424; telephone, (415) 561-8540.

AVAILABILITY OF COMPANION DOCUMENTS

Appendices 2 and 3 of the original guideline document provide information about the SmartSight Initiative in Vision Rehabilitation. Also available from www.aao.org/smartsight.

Print copies: Available from American Academy of Ophthalmology, P.O. Box 7424, San Francisco, CA 94120-7424; telephone, (415) 561-8540.

PATIENT RESOURCES

Appendix 1 in the original guideline document provides a SmartSight Initiative in Vision Rehabilitation handout for patients. Also available from www.aao.org/smartsight.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This summary was completed by ECRI on December 1, 1998. The information was verified by the guideline developer on January 11, 1999. The summary was updated by ECRI on September 3, 2001. The updated information was verified by the guideline developer as of October 8, 2001. This NGC summary was updated by ECRI on January 4, 2006. The updated information was verified by the guideline developer on January 30, 2007. This NGC summary was updated by ECRI Institute on February 6, 2008. The updated information was verified by the guideline developer on February 27, 2008.

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